TAIWAN'S GREEN MARK PROGRAM

Introduction

The Green Mark Program was launched in 1992 by Taiwan's Environmental Protection Administration as a voluntary and positive ecolabeling program. The mission of the Green Mark is to "promote the concept of recycling, pollution reduction, and resource conservation." The program is currently administered by the Environment and Development Foundation (EDF), a private institution.

The objectives of the Green Mark are to guide consumers in purchasing "green" products, and to encourage manufacturers to design and produce them. The Green Mark expects to meet these goals through the following steps: selecting "environmentally benign" products to meet domestic demands; developing criteria; encouraging the public to consume Green Mark products, which will in turn stimulate their production; and participating in international activities such as ISO and GEN.

As of September 1997, The Green Mark Program had developed criteria for 41 product categories (two more are nearly complete) and had certified 451 products. Of the current 102 licensees (companies with one or more certified product), four are foreign-based -- two from the United States, one from Indonesia, and one from Singapore. These foreign-based licenses are for mercury-free batteries, detergent, and water-saving cisterns.

Recent Developments

Until recently, the Industrial Technology Research Institute (ITRI) acted as the Implementation Body of the Green Mark program; however, it was replaced by the Environment and Development Foundation (EDF). EDF was created for the following reasons. First, because ITRI provides consulting services for both the Environmental Protection Administration (EPA) and the Ministry of Economic Affairs (MOEA) and is considered their "technical arm," it is viewed by the public as a government-funded private organization. In contrast, it is hoped that EDF will be viewed as a more impartial, private organization. Second, the EPA hopes to gradually decrease its control and funding of the Green Mark program; it is anticipated that independent operation will help the program to become self-sufficient over the next five years. Third, because EDF is independent, it can be more flexible than ITRI in international cooperation activities. In the future, ITRI will give both technical and administrative assistance to EDF.

The effectiveness of the Green Mark Logo in the marketplace is unclear. The Logo is reported to be well known within the industrial sector, and many manufacturers are enthusiastic about applying for it. They would like to see the program expand the number of product categories. Among licensees surveyed, nearly 80 percent reported that the Logo is helpful for their company image, and 72 percent said it is helpful for promoting business. Despite these positive veiws,

several non-profit environmental groups are unsatisfied with the Green Mark Logo's low visibility among consumers. A 1996 ITRI survey shows that only 40 percent of the general public recognize the Logo, and only 30 percent of them report having bought labeled products.

Program Summary

The Green Mark is overseen by Taiwan's EPA and managed by EDF. The program is reviewed by the Review Committee, which has representation from the government, non-governmental organizations, academia, and other stakeholders. Other groups involved in the process are the manufacturers who receive the Green Mark Logo, and stakeholders such as manufacturers associations and consumer and environmental groups.

As the managers of the Green Mark Program, EDF is responsible for selecting product categories. To do so, it performs an annual survey of experts, industrial associations, and NGOs. EDF also collects information on product criteria, criteria scope, the major environmental concerns, and sometimes test methods, from foreign ecolabeling programs. Among the attributes considered during the review of proposed product categories are: threat to environmental quality; cannot be replaced by an existing "environmentally benign" product category (e.g. mercury-containing batteries can be replaced by mercury-free batteries); have less environmental impact than similar products; and cannot have any adverse effects on health and safety of humans. In addition, there must be a sizable number of domestic and foreign manufacturers. Proposed categories must be approved by the Review Committee.

EDF is also responsible for developing product criteria. The development process follows three guiding principals:

1. Product criteria should take into consideration Taiwan's local environmental conditions by accounting for such problems as insufficient water and electricity supply, and a landfill shortage, by including Green Mark criteria for low water and/or electricity use, or products that produce less pollution.
2. Between twenty and thirty percent of manufacturers must be able to meet the criteria with "reasonable" process modifications.
3. Criteria are compared with criteria from other ecolabeling programs.

Non-environmental attributes are addressed generally; it is the responsibility of manufacturers to be in compliance with environmental and "other related regulations," such as quality, safety, and industrial hygiene. As an example, the criteria for "Compost" cites the Council of Agriculture's specific regulation on compost regarding functional characteristics, among other things. Proposed criteria are submitted to a technical group convened for each product category. Criteria are announced at public hearings with manufacturers, government agencies, and experts. Finally, the proposed criteria are approved by the Review Committee. EDF usually develops six product criteria every year.

EDF is currently in the process of redesigning the product criteria review process. The Review Committee consists of 21 members with very diverse opinions, and decision-making has become difficult. Furthermore, the group meets only once every two months to review the product criteria. A smaller committee is under consideration to ease meeting logistics and to reach consensus decisions more quickly.

To be considered for the Green Mark Logo, manufacturers must provide documentation about both the company in general, as well as the specific product. Importers can apply for the Green Mark Logo if they can certify that they have had no significant environmental performance problems during the year prior to the application date. Documentation must include test reports completed by accredited laboratories on all quantifiable and measurable requirements in the criteria. Applicants must also submit signed statements regarding other qualitative or nonmeasurable requirements, for example, certification that a particular chemical was not used in the product's formulation. EDF reviews the submitted documents from manufacturers, conducts an audit, samples and inspects the product, makes a recommendation for award, and monitors the use of the Green Mark Logo. [5] The Review Committee is responsible for awarding the Logo. The award is valid for two years, and the licensee may re-apply, following all requirements set forth in the guidelines. No licensee has ever failed to qualify upon renewal.

Although it is the responsibility of the licensee to ensure that they remain in compliance with Logo requirements, EDF conducts a follow-up site test with a random 20 percent of the licensees. EDF also performs on-site investigations when EPA notifies them of a possible label misuse. Another way that the Green Mark Program ensures that the label is used correctly is through market sampling on the part of non-governmental organizations, as well as EDF and ITRI staff. EDF reports that most instances of misused labels have been in advertising.

Currently, EDF collects only an application fee from applicants, although it plans to begin collecting annual fees next year. The application fee is approximately US$715 for new applications, and approximately US$535 for renewals. The Green Mark program's funding is mainly from the EPA. Its budget increased from $70,000 in the initial years to $363,000 in the past four years, and is expected to be $500,000 in fiscal year 1997.

The number of products approved for the Green Mark Logo has increased over the years, with the exception of a significant drop in 1996 when the category "products using CFC substitutes" was discontinued. This category was no longer necessary when all products in it, such as refrigerators and air conditioners, changed to CFC substitutes. Products bearing the Logo are not only purchased by retail consumers, but by industry as well. Industrial products include cement, insulation material, and bricks. According to the Program Director, Taiwan should have a

[5] EDF can invite experts and scholars to assist with product inspections.

"Government Procurement Policy" within the next few years, which would require government agencies to buy Green Mark products or products with equivalent environmental attributes. Taiwan will give a "price preference" of 10 percent for such products, meaning that the government will pay up 10 percent more for a product with specific environmental attributes.

Program Methodology

The Green Mark program is beginning to incorporate the concept of life-cycle assessment (LCA) into its product criteria development. Taiwan adopted LCA because ISO 14204 requires that Type I ecolabeling programs use "Life Cycle Consideration" when developing product criteria. This approach differs from the early stages of Green Mark's product criteria development, when criteria were often simple and based on one attribute, such as a preference for cloth diapers because they reduced inputs into the solid waste stream. Because of the complexity of LCA, however, the Green Mark program uses only simplified LCA techniques, using the matrix in ISO 14024 to make qualitative judgments regarding the environmental attributes associated with each product. As an example of the simplified LCA approach, when the criteria were developed for compact fluorescent lamps, the following attributes were considered: the amount of mercury discharged upon disposal, the level of electricity conserved, the volume of waste lamps disposed, and the nature and quantity of toxic materials used in the manufacturing process.

When selecting product categories, EDF evaluates environmental impacts of potential categories, uses a political process of voting, and selects categories when producers come forward voluntarily. The following have been considered in the development of product criteria: extracting and processing raw materials, manufacturing, transportation and distribution, product uses, reuse, recycling, final disposal, and ingredient or materials restrictions. The development process includes collecting information from literature, other programs, and participating producers. Proposed criteria are peer reviewed, but the critiques are not available to the public. The Green Mark Program does not conduct an impact assessment, but does follow SETAC guidelines.

Other Information

The program is accessible to all small and medium sized businesses, and although the Program does not have a program to encourage their participation, half of the licensees are small or medium sized.

Taiwan is an active member of GEN and is working closely with other ecolabeling programs on ISO draft standards. In addition, Taiwan has finalized a mutual recognition agreement with TerraChoice in Canada. One problem encountered during the negotiations was that Green Mark requires recycled content tissue paper to be 100 percent domestically recycled. To facilitate the agreement, "domestically" was deleted from the standard. Taiwan is also working with TerraChoice on establishing a mutual recognition framework and process. The goal is to establish a system that "enables reciprocal acceptance of tests, inspections, conformity assessment, administrative procedures, and, where appropriate, environmental criteria." According to the

March 97 issue of *GENews*, such a system would include a set of guiding principals incorporating international trade agreements and ISO standards, and would deal with transparency and open access, as well as mutual confidence and respect; flexibility to deal with "different ecosystem sensitivities, products, values, priorities and marketplaces in different countries;" and cooperation mechanisms.

In an effort to expand the awareness of the Green Mark Program, the program participated in the five-day National Environmental Protection Week held in January 1997. The Green Mark booth exhibited products bearing the Green Mark Logo. It received over 200,000 visitors during the exhibition. On a more regular basis, the Program educates the public about new product criteria by way of announcing them in the newspaper, distributing a quarterly journal to over 3,000 industrial and governmental sector recipients, and posting updates on its Internet Web site (http://www.greenmark.itri.org.tw).

References

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Product Categories (number of awarded products in parentheses)

Final Categories

Products made from recycled plastic or waste rubber (15)
Office use papers from recycled paper (2)
Toilet papers from recycled paper (1)
Stationery papers from recycled paper (33)
Packaging papers from recycled paper (41)
Portland blast furnace cement (3)
Thermal insulation materials for building (5)
Mercury-free batteries (15)

Products using solar energy battery
Cloth diapers (1)
Water-based paints (13)
Products made from recycled wood (6)
Products using substitute for CFCs [dropped] (82)
Beverage cans with stay-on tab (39)
Refilling pouch (4)
Single flush cisterns (96)
Personal computers (2)
Monitors (16)
Printers
Reusable shopping bags (2)
Electric motorcycles
Compact fluorescent lamps
Washing machines (29)
Laundry detergents (1)
Dish-washing detergents for handwash
Non-bleached towels
Dual-flush water saving cisterns (2)
Household refrigerators and freezers (30)
Household air conditioners (13)
Compost (1)
Building Material Made from Recovered Wastes (1)
Agricultural-use products from degradable plastics (new)
Packaging-use products from degradable plastics (new)
Sanitary products from degradable plastics (new)
Consumer products from degradable plastics (new)
Non-asbestos friction material (new)
Tooth Brushes with Replaceable Heads (new)
Glow Starter for Fluorescent Lamps (new)
Water-saving Faucets/Devices (new)
Water Conserving Dual-flush Cistern Retrofit Devices (new)

Guidelines Under Development

Shower heads
Stabilizers